Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Framework for Next Generation 911	)	PS Docket No. 10-255
Deployment	)	
	)	

COMMENTS OF AT&T INC.

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COMMENTS OF AT&T INC.

I. INTRODUCTION AND SUMMARY

AT&T Inc., on behalf of itself and its affiliates ("AT&T"), hereby submits comments in response to the Federal Communications Commission's ("FCC" or "Commission") Notice of Inquiry ("*Notice*") in the above-referenced proceeding.[1] The *Notice* initiates a comprehensive proceeding to address how Next Generation 911 ("NG911") can enable the public to obtain emergency assistance by means of advanced communications technologies beyond traditional voice-centric devices. [2] AT&T applauds the Commission's efforts to bridge the gap between the capabilities of modern networks and devices and today's 911 systems, and recognizes that many challenges remain before NG911 systems can be deployed. AT&T already is deeply engaged in this transition, contributing to meetings with the Communications Security, Reliability, and Interoperability Council ("CSRIC"), the Emergency Access Advisory Committee ("EAAC"), and the National Emergency Number Association ("NENA"), and engaging with standards development organizations such as the Alliance for Telecommunications Industry Solutions

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1 *Framework for Next Generation 911 Deployment*, Notice of Inquiry, PS Docket 10-255, FCC 10-200 (2010) ("*Notice"*).

2 *Notice* at ¶ 1.

("ATIS"), in an effort to advance the efficient deployment of NG911 systems. However, additional substantial work is required to make NG911 a reality.

A successful transition to NG911 will depend on a standardized, basic NG911 infrastructure that includes an originating service provider and access network, emergency services IP network ("ESInet"), and routing capabilities being in place before additional advanced services, such as texting, still images, or video, are added. The deployment of advanced 911 services will ultimately depend on the PSAP's ability to receive information from different media types and the ability of end-user devices and originating networks to support delivery of different media types to the NG911 network. A lack of standardization in the deployment of NG911 will result in mass consumer confusion as people struggle to determine what services are supported in which parts of the country. This kind of confusion will not only slow effective emergency response, but in some cases might prevent the dispatch of critical, life-saving assistance altogether. An effective education campaign will play an important role in reducing consumer confusion during the transition.

Moreover, additional advanced services should not be added to the NG911 network until they are built to mission critical standards. There is a difference between NG911 service and next-generation originating networks. While next-generation originating networks are necessary to enable many advanced features, they are not sufficient. Next-generation originating networks will require an effective end-to-end testing capability for each supported feature – testing that does not require the involvement of PSAP personnel. AT&T supports current standards work aimed at developing non-voice emergency services ("NOVES") standards for NG911 networks and systems, and looks forward to the value these services will provide in the provision of emergency communications.

In addition, deployment of NG911 networks will present new funding, liability, and security issues that must be addressed by the Commission. The Commission should ensure full liability protection for carriers during and after the transition to NG911 systems. Furthermore, the present method of funding 911 services through subscriber fees will be inadequate in a NG911 environment. Instead, AT&T proposes that the Commission push Congress and the states to fund NG911 through general tax revenues.

AT&T looks forward to reviewing the ideas and data submitted by commenters, and hopes that the information gathered in this proceeding will lead to more focused discussions going forward.

II. NG911 CAPABILITIES AND APPLICATIONS

A. The Commission Should Ensure Consistency in NG911 Systems Across the Country Before Adding Significant Advanced Services

Standardization in NG911 systems across the country is needed to ensure an efficient transition from legacy 911 to NG911 networks that minimizes consumer confusion. The transition to NG911 promises untold benefits for public safety and homeland security. But, at the same time, the transition presents complex, new challenges.[3] To overcome these hurdles, a successful transition will require standardization of the NG911 network and the originating network interfaces before significant advanced services can be supported. As in other deployments of new technology, meeting the varying needs of different markets will require

[3] For example, NG911 networks will be accessed by a wide variety of end users and devices, many of which will have identifiers other than telephone numbers. Additionally, unlike legacy 911 systems, NG911 networks will support mobile, nomadic, and fixed services: both voice and non-voice. Also, in NG911 systems, network access and communications service may be provided by separate entities rather than the same.

room for variation in NG911 networks. However, these variations should come at the network level and not be visible to the public at the service level.[4]

Core and non-core elements of NG911 systems will continue to be affected by further developments in technology and capabilities. Nevertheless, by relying on packet switched technology and wireless telecommunications supported by standards-based protocols such as IPV6, IMS, and 3GPP, NG911 networks can, to some extent, be "future-proofed." In addition, development of common technologies (*e.g.*, IMS) across commercial, public safety broadband, and NG911 emergency services networks will help support interoperability and interworking and provide a consistent set of services. Such an approach will ensure that the future technology path will justify any large up-front investments.

B. The Commission Should Not Include Additional Media Types in NG911 at this Time

The Commission should limit NG911 to basic media types at the outset of NG911 deployment. As the Commission notes, "NENA, the IETF, and others have been actively engaged in developing and harmonizing technical standards to support such IP-based NG911 [non-voice media types]."[5] While there is consensus that NG911 should include some combination of non-voice media types, the work in NENA and the IETF alone is not sufficient to support such media types, especially in IMS-based networks. Standardization of the 3GPP NOVES and definition of the interface between IMS-based networks and the NG911 network is a pre-requisite for deployment of additional media types. Limiting NG911 to basic media types at the outset of NG911 deployment will also reduce backwards compatibility issues with legacy

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[4] For example, variation could exist in the ability to transmit information to hospitals or other first responders.

[5] *Notice* at ¶ 32.

and existing E911 systems that do not support certain new media types. In contrast, pushing ahead with new media now—when new media capabilities are not integrated into every handset and standards have not been completed—will only add to the confusion already surrounding 911 capabilities. Further, until a media type is built to mission-critical standards, it should not be used for emergency communications. Currently, only voice meets this standard.

Instead of including additional media types in the NG911 at this time, the Commission should ensure that NG911 standards permit open origination, transmission, storage, and processing of media. Currently, IMS is the leading international standard for supporting services in wireless and converged networks. By embracing international standards such as IMS and NOVES, NG911 will be able to incorporate additional media types as they become available. The Commission should not shift its focus to new media types until after such standards are universally adopted.

Whatever future media types are ultimately supported, they should all adhere to the NOVES standard. For example, the industry is still considering how text messaging might perform in an NG911 environment. Although existing "best effort" SMS should not play a role in any 911 service, there are several alternate technologies under investigation in the 3 GPP NOVES Standards including Real Time Text (RTT) and Instant Messaging (IM). Until the standards are finalized, no technology should be designated as the replacement for dated Teletypewriter (TTY) technology. Non-text and advanced media types—such as still images, real-time video, and telemetry data—similarly require development and standardization before they are used for emergency communications. The NG911 community will need to explore and understand how these advanced media types will be used in the real world. For example, in the case of two-way, real-time video, the community will need to consider if the 911 caller will see

the PSAP representative. There may be several reasons why this would be inappropriate, such as security or privacy concerns. Finally, the Commission should not specify which technologies should be used in the NG911 environment, but should allow standards to define these technologies.

Looking further into the future, NG911 will allow users to communicate to public safety using new media types, and the Commission must plan for the effective roll-out of these functionalities now.[6] The *Notice*, for example, recognizes broad consensus in the public safety community that "NG911 should include some combination of non-voice media types, and to this end, NENA, the IETF, and others have been actively engaged in developing and harmonizing technical standards to support such IP-based NG911 solutions."[7] To ensure a safe and orderly roll-out of these new media types, PSAPs will need extensive training. Currently, 911 call-takers are not trained to handle multiple messages and conversations over a variety of media types at the same time. PSAP call representatives also may lack the skills required to interpret data received by medical or other devices. For this reason, including additional media types in NG911 systems risks confusing 911 call-takers and compromising effective emergency response to potentially life-threatening situations, not to mention overwhelming 911 systems with information. Training will be essential to ensure that PSAPs can efficiently use these new information flows. To avoid mass confusion, the public will also need to be educated on the capabilities of new media types before they can be included in NG911 systems, including education as to which media types provide the most reliable and timely means of getting help.

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6 *Notice* at ¶¶ 33-37.

7 *Notice* at ¶ 32.

It is also premature to include auxiliary medical and personal data in NG911.[8] The transmission of this kind of sensitive information over the NG911 network presents significant privacy and security issues that must be resolved before this data is integrated into the NG911 system. Auxiliary data proposed would include relevant information about a person's medical condition and particular treatment needs, as well as other private information. However, the person associated with the data may or may not be the subscriber or the user of the telecommunications device. Therefore, prior to sending this information in the NG911 network, the person who is associated with the data should be required to provide opt-in consent consistent with evolving privacy standards.[9] As such, carriers are ill-equipped to maintain or send this data to the NG911 Network and should not be required to support auxiliary data of this type.

C. PSAPs and Origination Devices Should Support Primary Media Types that Allow for Reliable, Two-Way Communication Between a PSAP and 911 Caller

At the outset of NG911 deployment, PSAPs and origination devices should be expected to support primary voice services only. Once other media types evolve to provide a basic communications link between the 911 caller and the PSAP during an emergency call—and NOVES standards are complete and deployed in both the originating networks and the emergency services networks—primary media types will likely expand to conversational-grade text-based and other media types. Such an approach will ensure that consumers communicate

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8 *Notice* at ¶ 38.

9 Express prior-consent would likely be acceptable.

with emergency services in a timely and secure fashion.[10] Media types that do not permit reliable, live conversations between the 911 caller and the PSAP—and that are not likely to ever offer this functionality—should not be considered primary media types. For example, store and forward technologies, such as SMS and MMS, do not provide conversational levels of service and should not be considered primary media types now or in the future.

AT&T is concerned that relying on secondary media types, such as email or social media sites, as a means of contacting a PSAP raises several problems. Recognizing that primary media may not be available to a 911 caller in some cases, due to network congestion or end system limitations, the *Notice* seeks input on whether e-mail or social network status pages could also be used as a primary means of contacting a PSAP.[11] Unlike other primary media types considered by the Commission, email and social media sites, like SMS and MMS, are not real-time services that ensure the type of reliable, two-way communication that is necessary for effective E911 services. These services are uniquely vulnerable to abuse because they enable users to remain anonymous and rely on easily exploitable IP networks. Accordingly, until a specific media type is built to mission-critical standards, it should not be used for emergency communications.

In the future, AT&T envisions that secondary media types, such as still photos, live video, and sensor data, may provide supplemental information to PSAPs by employing "bid and reply" protocols. Under these protocols, a PSAP would request service and a user would authorize the device to respond with its capabilities. The adoption of international standards,

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[10] The *Notice* suggests that primary media will likely include voice, RTT, and text-based messaging because these media types permit live conversations between the 911 caller and the PSAP. *Notice* at ¶ 39.

[11] *Id*.

such as IMS, will greatly facilitate these kinds of media negotiations between devices in the future. In this vein, all PSAPs should be expected to support a specific set of media types as defined in appropriate industry standards. The alternative—permitting individual PSAPs to select the media types that they will support—will confuse callers because callers will not know what capabilities exist in the different geographic areas in which they travel.

Enabling access to 911 services via the alternative (non-voice) primary or secondary media types proposed in the *Notice* will require significant changes to current laws and regulations. Many existing 911 laws are written based on the assumption that the notification to the PSAP will be delivered through a voice call to 911. Existing 911 capabilities, including routing of the call to the PSAP, callback capabilities, and location determination of the caller, are based on a voice call to the PSAP. In a NG911 system, however, this will not always be true. Some requests for assistance may be sent without an actual "call" to 911, as in the case of a text message, while others may be originated without any human involvement at all, such as in the case of a vehicle telematics system that automatically contacts a PSAP after an automobile accident. Furthermore, secondary non-conversational media may trigger the transmission of sensitive personal data (*e.g.*, protected health information) over the NG911 system. At a minimum, service providers will require enhanced liability protection and limitations on expectations of privacy with respect to these new media types and capabilities. As with E911 today, subscriber privacy issues must be addressed through provisions of agreements and licenses. Some form of expressed or implied consent must support the transmission of personal, private information via new media types in emergency services messaging.

Future NG911 media types should also account for the emergency communications needs of non-English speakers. Specifically, in a standards-based network supporting IMS and

NOVES, non-English speakers should have access to the same NG911 media types as English speakers and should be able to use the same types of devices. Still unclear, however, is how many languages should be supported. Notably, in the Commercial Mobile Alert System ("CMAS") proceeding, the record showed that although English and Spanish are the primary languages for over 99% percent of all households nationwide, the percentage of households that use non-English languages can change radically from locality to locality.[12] Determining which languages the NG911 system will support should be done in the early stages of NG911 planning because a multi-language system will impact devices, originating networks, and emergency service networks.

State laws and regulations governing the types of devices and "calls" allowed to access the NG911 network will also require modifications. For example, states will need to: (1) review laws and regulations concerning the eligible use of NG911 funds; (2) ensure that laws or regulations do not require specific technology components for E911 service delivery that are incompatible with NG911 service; (3) eliminate laws and regulations that inhibit efficient sharing of NG911 data, but retain appropriate safeguards for privacy protection; (4) craft uniform requirements for all NG911 service providers that meet accepted industry standards; and (5) ensure that laws and regulations are functional, standards-based, and performance-based without reference to any specific proprietary technology, manufacturer, or service provider.

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[12] CMSAAC recommendations, § 5.7 (noting that while Spanish and English would cover 99 percent of all U.S. households, there are more than 37 languages in the United States that exceed 1 percent of households on a local level and explaining that delivering CMAS alerts in these languages would require mobile devices capable of supporting at least 16 different character sets).

D. Given the Severe Limitations of SMS, the Commission Should Not Require NG911 Networks to Support SMS in Emergency Communications

Despite SMS's explosion in popularity in the past decade, SMS suffers from significant limitations that make it both dangerous and infeasible to rely on for emergency communications. The industry has already considered, and rejected, several proposals to enable emergency SMS for an interim, pre-NG911 environment,[13] all of which failed to address the shortcomings of SMS for emergency communications for the general public. Rather than configure NG911 networks to support SMS emergency communications, the Commission should encourage work by industry groups such as NENA, ATIS, and 3GPP to develop standards for NOVES for next generation networks that include non-SMS text based messaging options. The Commission should also work with relevant stakeholders to educate the public about the current limitations of SMS for emergency communications.

1. SMS Suffers from Significant Limitations and Should Not Be Used for Emergency Communications

The Commission should not require that NG911 support SMS. Recent studies have established a substantial record regarding the shortcomings of SMS for emergency communications.[14] 4G Americas, a wireless industry trade association representing the 3GPP family of technologies, recently published a white paper providing a technical and practical analysis of SMS as a means of contacting emergency services.[15] The report, titled "Texting to 9-

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[13] In the CMAS proceeding, commenters explained that SMS would not provide an adequate solution for commercial mobile alert messaging. The Commission implicitly agreed by refusing to incorporate SMS into its rules. *CMAS First Report and Order* at ¶ 35.

[14] Already, the Commission has recognized that SMS "has limitations that will need to be addressed if it is to become a reliable means for emergency communications." *Notice* at ¶ 41.

[15] *See* 4G Americas Texting to 9-1-1, Examining the Design and Limitations of SMS (Oct. 2010), *available at*

1-1, Examining the Design and Limitations of SMS," ultimately concluded that SMS is not suitable for emergency communications, especially under life-threatening situations.[16] The Emergency Services Working Group ("ESWG") of the Canadian Radio-television Telecommunications Interconnection Steering Committee ("CISC") also recently released a report on SMS text messaging to 911 service with similar conclusions to the Canadian Radio-television and Telecommunications Commission (CRTC).[17]

Ultimately, SMS is not a real-time communications service, but a best-effort, store-and-forward service. The store-and-forward system design makes SMS unreliable and prone to unacceptable delays for purposes of emergency communications.[18] The Commission itself has made clear that SMS is an "asynchronous messaging service that does not provide a means for the sender to know whether and when the message has reached its destination."[19] It is virtually impossible to guarantee a real-time two-way text communications exchange using SMS technology. SMS was never designed nor deployed to provide any time-sensitive, mission critical service. Moreover, there is no guarantee of delivery – immediate or otherwise – of an SMS message, whether for commercial or emergency purposes. Similarly, no acknowledgments of sent, delivered, or read SMS messages are provided to the sender. As such, most wireless

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http://www.4gamericas.org/documents/SMS%20to%20911%20White%20Paper%20Final%20October%202010.pdf, ("*4G Americas Texting to 911 White Paper*").

16 *4G Americas Texting to 911 White Paper* at 71.

17 *See* Text Messaging to 911 Service, Canadian Radio-television and Telecommunications Commission Interconnection Steering Committee (CISC) Report to the CRTC by the Emergency Services Working Group, Report Number: ESRE0051, January 21, 2010 ("*ESWG Text Messaging to 911 Report"*).

18 Because these SMS limitations are tied to the fundamental design of the SMS system, they are present regardless of whether a communication is mobile-to-mobile or mobile-to-fixed.

19 *Notice* at ¶ 41. *CMAS First Report and Order* at ¶ 35.

operators do not make service level representations to SMS customers beyond "best effort."[20] Without any kind of guaranteed delivery or service baseline, it would be impossible to maintain session continuity across messages and ensure the kind of two-way communication that is necessary for emergency communications. Further, the existing short code system is not a feasible mechanism for routing SMS emergency messages to PSAPs. For example, one national short code would be challenged in routing because location of the caller would not be available. Meanwhile, dedicating a short code to each PSAP would require over 6,000 short codes, and would place an unacceptable burden on 911 callers to determine which short code to use to contact the PSAP in their current location.

There are no standards or approaches that would address the significant limitations of SMS for emergency communications that are described in the 4G Americas white paper. Attempting to re-design SMS to provide these capabilities would require substantial reengineering of network systems, which would take just as long as creating Next Generation Messaging in LTE and would require the redesign of mobile devices to accommodate the revised SMS functionality. Industry effort is better spent on developing the NOVES solution in 4G architectures.[21]

Understandably, the disabled community has expressed interest in text-to-911 capabilities. In response, the wireless industry has already considered several proposals to enable emergency SMS texting-to-911 as an interim solution in a pre-NG911 environment for people with disabilities. Unfortunately, none of the proposals promise an easy or reliable

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[20] *4G Americas Texting to 911 White Paper* at 50.

[21] As wireless networks move to 4G IP architectures, the limitations of SMS will still be inherit in the SMS system since it was designed as a best-effort, store-and-forward service. Thus, the only practical solution is the standardization of NOVES in 4G architectures.

solution for the disabled or the general population. There is simply no current capability in the SMS Network for communicating subscriber location to the PSAP, since the architecture of SMS does not support either determining or delivering location information. Allowing for such capabilities would require substantial reengineering of network systems—which would take as long as creating NOVES in LTE—and require the design of such functionality into new mobile devices. Until these specialized applications are integrated into every handset, SMS capabilities would not be available to everyone, further adding to the confusion already surrounding 911 capabilities to support SMS texts. Enabling the ability to locate and route the emergency text in the same manner as a 3G voice 911 call would require modifications to all end-to-end systems in the E911 voice and data paths. Additionally, the vast majority of public safety network platforms or systems are not equipped to accept and process text messages.

AT&T recognizes that a near-term solution for text-to-911 service for the disabled community must provide location and routing information. Interim solutions using SMS with limitations might be found in the silent call scenario, which is currently under trial in Canada and with some operators in the United States.[22] Under this option, a SMS message is preceded by a silent wireless call with a "DHHSI" indicator for PSAPs.[23] TTY emulation may also provide a near-term solution for the disabled community, but needs further research as well. A significant benefit of TTY emulation will be that PSAPs that already support TTY will not have to upgrade to support the new service. However, the TTY emulation technology is unproven and further research and new mobile devices would be required. Other potential near-term solutions include

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22 *See ESWG Text Messaging to 911 Report*.

23 "DHHSI" is the EWSG acronym for Deaf, Hard of Hearing, or Speech Impaired.

the creation of a national SMS relay center and the use of Real Time Text ("RTT"), although further investigation and development work is necessary. [24]

Above all, it must be recognized that because SMS-to-911 is a best effort service with no delivery or performance guarantee, full liability protection would have to be afforded to wireless operators. Given the higher probability of SMS-to-911 message failure, liability protection for SMS-to-911 services would have to be far stronger than those currently provided for voice calls to 911.

2. Public Education About the Limitations of SMS for Emergency Communications Is a Necessity

There is no doubt that texting, particularly SMS, has exploded in the past decade. There are millions of SMS messages sent each day and there is a perception that SMS is a reliable service, despite the fact that it is a "best effort" service that suffers from many limitations.[25] Accordingly, there is already significant confusion surrounding the capability of available SMS services to support text messaging to 911. If the Commission fails to establish clear direction for a standardized design for non-voice emergency communications, the result will be a patchwork implementation of non-voice emergency capabilities and additional consumer confusion. Wireless users will have no way of knowing when they are within the jurisdiction of a PSAP that supports these capabilities and when they are not.

To illustrate, an announcement by Black Hawk County that its 911 call center in Waterloo, Iowa was the first in the United States to accept SMS text messages-to-911 in place of

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[24] Although RTT has been mentioned as a potential interim solution, fundamental design questions remain as to how RTT will provide basic emergency service capabilities, including routing to the PSAP, location, and callback.

[25] *4G Americas Texting to 911 White Paper* at 5.

phone calls resulted in mass confusion among wireless users.[26] As wireless users unfortunately found out, only residents who were enrolled with i wireless, a T-Mobile affiliate, were able to make use of the service. Other area residents who tried to use the service simply received an SMS message instructing them to call 911 instead, or that the 911 number the SMS was sent to was invalid. Further, because the text messages could not carry location information, users were prompted to enter their zip codes before their message was forwarded to the 911 text services. If the caller was in an area not served by i wireless, they were again instructed to call 911. The confusion in Black Hawk County, Iowa spread throughout the country. As a result, King County, Washington found it necessary to educate residents that they should not rely on texting-to-911 in place of calling 911.[27]

Additional public education is necessary regarding the limitations of SMS for emergency communications and the capabilities of NG911 systems. This need will only increase as the implementation of NG911 changes consumer expectations about 911 capabilities, potentially deepening public misunderstandings about what emergency services are available. In order to assign costs to cost-causers, parties that contribute to this consumer confusion should be responsible for developing and conducting the public education efforts.

III. NG911 ARCHITECTURE.

A. Reliable and Efficient IP Network Performance and a Secure Network Are Critical Inputs for the NG911 Transport Network

The NG911 architecture must be designed to facilitate reliable and efficient IP network performance. NG911 will rely on IP-based architecture rather than the PSTN-based architecture

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[26] Eric M. Zeman, "Black Hawk County, Iowa, First to Accept 911 Texts," (Aug. 6, 2009), *available at* http://www.phonescoop.com/news/item.php?n=4678.

[27] *See* Enhanced 911 Program Office, "E-911 Public Education," *available at http://www.kingcounty.gov/safety/E911/PublicEducation.aspx.*

of legacy 911 to provide an expanded array of emergency communications services that encompass both the core functionalities of legacy E911 and additional functionalities that leverage the enhanced capabilities of IP-based devices and networks.[28] Given the NG911 system's reliance on IP networking for emergency call transport, IP network performance will play a key role in call quality. IP transport will also have to be optimized for different media types, such as voice, video, and data, which present unique network challenges because of their sensitivity to time. Unless there is a mechanism supporting the underlying transport network in NG911 systems that can guarantee the security and the quality of service from the PSAP to every point of contact, NG911 systems will not be able to provide reliable service.

As the Commission states, "a variety of protocols can be used to transport media types across the network from the 911 caller to the PSAP"; it is essential that these be standardized end-to-end protocols that are supported through IMS and NOVES.[29] Because a mix of physical infrastructures, networking protocols, applications, and devices may facilitate NG911 emergency communications, all architectures—including IMS based solutions, "pure" IP-based solutions, solutions that rely on existing legacy infrastructure, and solutions that rely on gateway packet-based communications between callers and PSAPs—must be supported.

B. The Commission Should Limit the Scope of NG911 Obligations

Although many electronic devices in the future will have communications capabilities, including televisions, in-car systems, portable music players, tablet computers, and game consoles, the Commission should avoid requiring all such devices to have the ability to request

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[28] All parties must work to ensure that there is no degradation in current 911 services during and after the transition to NG911.

[29] By way of illustration, still images may be carried using several different protocols, including MMS, email, social networking sites, and other web services.

emergency assistance. While the Commission is considering requiring all devices with Internet or cellular connectivity and a "suitable user interface" to have such ability, it not sufficiently clear what constitutes a "suitable user interface."[30] For example, would a device require a microphone before it will be deemed to have a "suitable user interface" for emergency communications? Will video devices be expected to request emergency assistance? Will a suitable device be expected to have the ability to determine location and send that location to the NG911 network and have "callback" capabilities?

While the number of devices with Internet or cellular connectivity and a "suitable user interface" may increase dramatically in the near future, many of these devices will not be suitable for—nor will consumers expect them to be suitable for—contacting emergency services. Examples include E-readers, smart appliances, gaming devices, and MP3 players. Other devices such as dedicated health devices, telematics devices, and security devices may or may not have the capability to contact 911 directly. Given the unresolved questions and lack of consumer expectations, the Commission should not require all devices with communications capabilities or Internet access ("IP enabled") to have 911 connectivity.

Just as some devices are not suitable for 911, in many instances it will be difficult to determine which devices will offer voice or other communication services. For this reason, AT&T opposes the labeling of devices as 911-capable. Imposing this kind of requirement on manufacturers would not be feasible, as after-market and over-the-top software applications, which the manufacturers or carriers have no control over, often allow users to access voice or data communications.

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30 *Notice* at ¶ 52.

Further, the Commission should not expand the four criteria for determining which licensees should be subject to the wireless enhanced 911 obligations, as established in the *E911 Scope Order*, to sweep in additional NG911 participants such as hot-spot providers that are not traditional communications providers.[31] The *E911 Scope Order* established that those licensees that should be subject to the wireless enhanced 911 obligations: (1) offer real-time, two-way switched voice service, interconnected with the PSTN, either on a stand-alone basis or packaged with other telecommunications services; (2) have customers that clearly expect access to 911 and E911; (3) compete with analog and broadband PCS providers; and (4) are positioned to provide technically and operationally feasible enhanced 911 service.[32] Modifying the four criteria, for example, to require hot-spot providers, such as coffee shops, hotels, bus lines, or public parks, to play a role in the deployment of NG911 risks stifling hot-spot deployment around the country. Imposing a requirement on hot-spot providers to provision 911 services also raises significant legal and liability concerns for these entities. In order to encourage the deployment of hot-spots in the United States and limit the liability of hot-spot providers, the Commission should not modify the criteria established in the *E911 Scope Order* to expand the scope of E911 obligations beyond traditional communications providers.

Finally, PSAPs likely will oppose user testing of a device's ability to reach 911 where that capability is conditioned on a properly configured network connection or other similar factors. Such testing would strain the 911 system, as it would require that parties execute all of the same functionality of an actual 911 call, including delivery to the PSAP. In many instances,

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[31] *See In the Matter of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems,* Report and Order and Second Further Notice of Proposed Rulemaking, 18 FCC Rcd 25340 (2003) ("*E911 Scope Order"*).

[32] *See E911 Scope Order,* 18 FCC Rcd at 25347.

PSAPs already discourage end-user testing due to issues with the volume of tests and the inability to differentiate between tests and actual emergencies. Carriers and PSAPs alone should continue to be the parties responsible for conducting 911 testing.

C. International Standards and Effective Certification Testing Will Ensure Seamless Interoperability Within NG911 Networks

The combination of international standards, coupled with effective certification testing, represents the best approach to ensuring seamless interoperability.[33] To a great extent, standards for digital information transported on NG911 networks already exist, and specific technical standards or architectures should not be mandated. Important international standards include IMS, SIP, IPv6, NOVES, and 3GPP-LTE.[34] Adherence to these standards will help ensure compatibility, so PSAPs can receive and process voice, text, photos, video, and other digital information that is sent by the public.[35] Regardless of the standards selected for NG911, the Commission should recognize that while certain media types, such as camera images, can range in quality, specifying minimum quality levels will be technically challenging and ultimately limit the ability of users to choose different devices to access E911. Although most cameras have configurations that allow for varying levels of quality in images or video, even low quality photos or video might still provide value to a PSAP responding to a request for emergency

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[33] Recognizing that many potential NG911 media types permit a range of encoding and performance parameters and that NG911 will require use of compatible formats across the network, the *Notice* seeks input on how best to ensure compatibility in the formatting and coding of texts, photos, and other digital information. *Notice* at ¶ 54.

[34] Specialized exceptions in telecommunications standards, on the other hand, will only serve to impose a burden on carriers and PSAPs, as the exception in the 3GPP standard for "North American Emergency Services" demonstrates.

[35] In particular, steps need to be taken to ensure that NG911 networks will interoperate seamlessly with video software and applications being utilized in smart phones, tablets, computers, and other devices as more people, especially in the disabled community, make video-based telephone calls.

assistance.[36] Accordingly, the Commission should think carefully before establishing minimum standards.

Effective deployment and operation of NG911 also will require an effective certification process that indicates whether a device or downloadable software application is compliant with established standards. While self-certification exists today, the lack of effective end-to-end testing capability limits its effectiveness. Given the scope and complexity of NG911 system requirements, an approved certification lab – perhaps a not-for-profit or cooperative organization – should be established to overcome the limitations of self-certification.

All carriers and most manufacturers of telecommunications equipment already support certification processes that ensure that all handsets, as well as the network infrastructure, support E911 Phase 2. AT&T encourages the Commission to support similar certification programs that provide an effective and supportive environment for system development and integration for NG911. As the FCC encourages more open development and availability of end-user devices, the responsibility for certification will shift from the carrier to the handset manufacturer vendor. The Commission must account for this shift, which is already underway, in planning for NG911 device certification. Similarly, as the capabilities of PSAP systems increase, so does the need to certify that PSAP devices support NG911 features.

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[36] The *Notice* explains that photos, for example, are typically compressed using the JPEG standard, but may also use other formats. Photos may also include meta data (EXIF), ranging from camera settings to embedded geographic location. Additionally, camera images can range from low-resolution web cam photos with less than one megapixel to professional-quality images with more than 15 megapixels and several megabytes in size. *Id*. For text, the *Notice* points out that accented and foreign language characters can be represented in a range of character encodings with Unicode in its UTF-8 encoding among the most popular. *Id*.

D. The NG911 Environment Will Encourage the Development of Virtual PSAPs

AT&T recognizes that NG911 systems will remove many of the location constraints of traditional circuit-switched technology. As the *Notice* explains, PSAPs will no longer have to be located in a single building at a fixed location.[37] Call takers that are organizationally part of a single PSAP can be located virtually anywhere a broadband Internet connection can be found. The Commission foresees that virtual PSAP arrangements will allow for more flexibility and efficient staffing and may allow PSAPs to better recover from major disasters by temporarily relocating operations.[38]

While virtual PSAPs hold new advantages over current 911 systems, changes in how PSAPs handle different media types in a NG911 system will inevitably impact carriers. For example, carriers will all be affected by how calls are routed to PSAPs, and the possibility of different routing for different media types. Providers and PSAPs will need to define a mechanism for correlating multiple media streams from a device to a PSAP. In addition, with the inherent flexibility that comes with NG911 for the location of the call-takers in remote locations, care must be taken to ensure equivalent capabilities between locations to maintain continuity of calls.

The Commission also seeks comment on how local data that is contained in current Computer Aided Dispatch Databases, MSAGs, or other repositories that are necessary for an efficient response by emergency personnel can be distributed on a timely and reliable basis for

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37 *Notice* at ¶ 56.

38 *Id.* AT&T does not foresee any regulatory or legal changes necessary to facilitate the development and operation of virtual PSAPs. Whether a PSAP is virtual is irrelevant, the same regulations and laws will apply.

use by non-local PSAPs.[39] Cloud computing, whereby shared servers provide necessary resources, and an NG911 emergency services network designed on an IMS architecture, can provide an efficient solution to this problem by providing requested information to other computers or devices on demand.

IV. OTHER SPECIALIZED NG911 APPLICATIONS

A. Deployment of NG911 Will Facilitate Device-Initiated Emergency Services and Other Specialized NG911 Applications

IP-based network architectures that support NG911 systems will be capable of supporting a number of other specialized NG911 applications. For example, an IP-based network will not only support emergency calls placed by human beings, but a variety of automatically triggered emergency calls made by devices. Examples of such devices include environmental sensors capable of detecting chemicals, highway cameras, security cameras, alarms, personal medical devices, telematics, and consumer electronics in automobiles. In fact, device-initiated calls are already assumed in much of NENA's work, and may also be addressed in future versions of the NOVES standards. The Commission should defer developing rules for such devices and only reconsider rules when current voice and NOVES standards are more mature. Existing laws, regulations, and tariffs must be modified, however, to ensure that device-initiated emergency services have access to the NG911 network.

IP-based network architectures could also feasibly support the use of social media to report an emergency or contact public safety during an emergency. To date, only anecdotal evidence exists on the limited occurrences of consumers actually using social media to report emergencies. In order for social media to be an effective tool in contacting public safety, PSAPs will have to dedicate human resources and equipment to monitor social network sites. Social

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[39] *Id.*

media networks and capabilities will also need to be enhanced to provide mission-critical communications. Until this happens, the Commission, public safety community, and social media providers should take steps to educate the public on the limitations of using social media to request emergency assistance.

AT&T proposes, however, that social media could play an integral role in communicating routine information to the general public. Routine information would include information that is not time-sensitive or unusual, such as road closings or delayed school openings. Indeed, some public safety agencies have already begun using social media for such purposes. The Seattle Police Department, for example, now uses Twitter to reduce and prevent auto theft by tweeting details of cars that have been reported as stolen and asking citizens who see a stolen car to call 911.[40]

The Commission also correctly notes that NG911 shares much of the same technical functionality as other location-based information and assistance services, such as 211, 311, and 511.[41] Deployment of NG911 will therefore facilitate off-loading of non-emergency calls from 911 to other N11 numbers, and vice-versa. AT&T foresees that this offloading will be done in the NG911 system, and not by the originating service provider.

Finally, while NG911's IP-based architecture offers the opportunity to provide additional auxiliary data to PSAPs and first responders, such as a caller's medical history, a description of the caller's residence or business location, and related data, AT&T is concerned with the liability and privacy issues relating to this kind of data. In addition, maintaining and protecting the

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[40] Richard S. Chang, "Seattle Police Using Twitter to Recover Stolen Cars," (Dec. 8, 2010), *available at* http://wheels.blogs.nytimes.com/2010/12/08/seattle-police-using-twitter-to-recover-stolen-cars/

[41] *Notice* at ¶ 60.

integrity of every possible 911 caller's different sets of data (*e.g.*, medical history, a description of the caller's residence or business location, including building floor plans, information about hazardous materials, and building occupants with special needs) would place substantial burdens on communications providers.

Furthermore, the originating service provider should not be required to associate such information with an emergency call or message, as this association may be incorrect. At this point in time, simply too many uncertainties exist regarding the use of auxiliary data. For example, the "user" of the device is often unknown, since the only information the originating service provider has is the basic subscriber information, which may be different from the actual user's information. Providing such data could lead to the inadvertent disclosure of a subscriber's personal information. For example, if a caller was contacting a PSAP on someone else's behalf (*e.g.*, a witness to an accident or medical emergency) or was using someone else's device, the subscriber's personal information could be provided to the PSAP and the information provided would not benefit the person in need of emergency assistance. These uncertainties highlight the need for additional liability and privacy protections for originating service providers before auxiliary data can be used as part of a NG911 system.

V. ISSUES RELATED TO NG911 IMPLEMENTATION AND TRANSITION

A. Carriers Will Require Full Liability Protection Under NG911

Liability concerns over NG911 deployment will arise in a variety of contexts and may pose a major impediment for the Commission. As the National E911 Implementation Coordination Office ("ICO") noted in its migration plan, a myriad of liability issues will need to be addressed through state or federal statutes.[42] For example, increased opportunities for the

[42] ICO, A National Plan for Migrating to IP-Enabled 9-1-1 Systems, Section 5-11 (Sep. 2009), *available at*

sharing and receipt of information will lead to new liability questions. Individual PSAPs that choose not to receive all information that is available from devices, despite technical availability of such information, may raise possible liability concerns. Moreover, as the *Notice* notes, "new liability issues could arise if errors occur in the transition of data."[43] Even in today's 911 networks, AT&T encounters patent litigation issues arising from use of the latitude and longitude of the handset for initial routing purposes. These types of issues will surely continue in NG911 networks.

Full liability protection must be afforded to all originating network providers in order to encourage successful deployment of NG911. Moreover, if federal requirements govern the regulation of NG911, wireless operators should be afforded federal liability protection as well.

B. The Commission Must Address Funding, Institutional, and Technical Issues to Ensure Coordinated, Ubiquitous Deployment of NG911

The vision for IP-enabled 911 is for an interconnected, nationwide implementation. The transition from a circuit switched network to IP-based technologies will be an evolutionary process, involving technological, economic, and institutional challenges. As with any transition, the move will present many challenges at many levels of deployment. Indeed, the ICO Migration Plan noted that a successful transition will depend on a high level of coordination, cooperation, and planning among the state, regional, and local 911 authorities, and will have to involve stakeholders and expert agencies as well.[44] Transition to future 911 services will also

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http://homelandsecurity.nv.gov/NCSC/National%20NG911%20Migration%20Plan/2009-10_National_NG911_Migration_Plan_FINAL.pdf ("ICO Migration Plan").

43 *Notice* at ¶ 72.

44 ICO Migration Plan at Section 3-1.

depend on the ability of originating service providers and underlying networks to locate IP-enabled 911 calls and route them appropriately.

There is no doubt that the transition to NG911 will face similar challenges as those experienced in the original launch of basic 911 service. Launch of the basic 911 service was accompanied with significant consumer confusion regarding whether or not there was access to a particular service in a particular area. Understandably, people expect the same level of access to 911 services regardless of which town, county, or state the caller is in. While it is true that service is inconsistent even with the devices that can access 911 now – landline, wireless, and VoIP phones – this disparity will only continue to grow as consumers adopt new voice, text, and video applications in the absence of concerted leadership and coordination over the deployment of NG911. Even more troubling, there is a chance that a failed non-voice emergency call attempt in a NG911 system could result in no immediate feedback to indicate that the attempt to contact a 911 operator was unsuccessful leaving the caller to believe help is on the way.

Coordinated, ubiquitous deployment of NG911 will minimize consumer confusion. Additionally, standardization of the NG911 network will reduce consumer confusion over what services are available and aid in achieving national interoperability. Until baseline standards are adopted, uncertainty among 911 decision-makers and service and equipment providers may hinder migration to IP-enabled 911.

The main impediment to accelerated deployment of NG911 systems, however, is lack of funding. Today, 911 is typically funded by subscriber fees on telephone services. This approach will be insufficient in the future. In fact, NENA notes that many areas of the country are already experiencing a decline in 911 revenues, as consumers have stopped using land lines and adopted

new telecommunications services not covered under current State and local 911 laws.[45] Furthermore, although the cost of replacing legacy 911 systems will vary substantially depending upon the size of the jurisdiction, the age and quality of the existing network infrastructure, and the technologies chosen for the new system, upgrading to NG911 is certain to require a significant appropriation of resources beyond the typical budget of a jurisdiction's 911 board.[46] New funding models and mechanisms that are technology neutral and dedicated for 911 services will be essential for sustaining IP-enabled 911 systems.

AT&T proposes that the Commission follow the recommendation from the CSRIC Working Group 4B Transition to Next Generation Final Report to form a Blue Ribbon Panel to address the funding issues related to the deployment of NG911.[47] Funding 911 through subscriber fees on telephone services is not only insufficient for funding NG911, but inappropriate. The provision of emergency services benefits every citizen equally. Additionally, the individual that places an emergency 911 call is often not the individual that benefits from that call. Funding NG911 services through general taxes, as opposed to placing the expense of NG911 services on a customer bill, provides a more appropriate mechanism for funding NG911 systems.

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[45] National Emergency Number Association, *A Policy Maker Blueprint for Transitioning to the Next Generation 911 System*, September 2008, p.11, *available at http://www.nena.org/sites/default/files/NG9-1-1PolicyMakerBlueprintTransitionGuide-Final_0.pdf.*

[46] Alabama is reportedly seeking over $14 million in funds for its NG911 upgrade. *See* Stephanie Taylor, "Alabama Could Pioneer New 911 Technology," Tuscaloosa News (Sep. 20, 2009), *available at* available at http://www.lakecountyfl.gov/pdfs/Procurement_Services/09-0608_RequestforProposals.pdf.

[47] *See* CSRIC Working Group 4B Final Report, Transition to Next Generation 911, at 137 (March 2011) ("*Transition to Next Generation 911 Final Report*").

Finally, achieving the true potential of NG911 will require substantial training efforts as call takers and dispatchers find themselves with new expectations and responsibilities. The increased quantity of available multimedia data will enhance and expand existing call-taking functions, and may increase the work-load of a call taker. Revamped training, as well as continuing education or retraining, will be critical to the success of NG911 implementation.

C. Disparate PSAP Capabilities in the NG911 Environment Will Frustrate the NG911 Transition

Limiting NG911 to basic media types at the outset of NG911 deployment will avoid consumer confusion and reduce backwards compatibility issues with legacy and existing E911 systems. Because the transition to NG911 will most likely be gradual rather than a large scale "flash cut," interworking and backwards compatibility issues with legacy and existing PSAPs will be challenging.[48] The use of media gateways to interwork with legacy PSAPs will only further complicate implementation of NG911.

The Commission can ensure that NG911 networks interoperate seamlessly with legacy networks by limiting advanced functionality in NG911 systems until a baseline network exists. A baseline network could take the form of advanced E911 centers that provide a hub that supports NG911 capabilities for legacy 911 centers. Not only will this ensure interoperability, but it will also limit the capital outlay required to deliver NG911 services, thereby accelerating deployment. These advanced centers will also support fallback routing, which will allow larger, regional entities to handle non-voice emergency services media types when the local PSAP cannot.[49] Fallback routing should be based on the capabilities of the PSAPs, not their size.

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[48] *Notice* at ¶ 66.

[49] Under this concept, larger command and control centers will support NG911 capabilities so that every PSAP need not be updated before certain advanced services can be supported.

The Commission should not, however, rely on a threshold percentage of PSAPs across the country to support certain media types before permitting them for emergency purposes. The Commission would better serve efficient deployment of NG911 by permitting such services only when the technology is available and deployed by both the originating networks and the emergency service network including the PSAPs. Ubiquitous deployment on a national basis is needed to avoid subscriber confusion. A media type should only be used for emergency communications when it is built to mission-critical standards. Until such time, federal, state, and local authorities should continue to educate consumers that only voice services will work to contact emergency services.

D. AT&T Supports Competition in the NG911 Marketplace

AT&T supports competition in the NG911 marketplace and recognizes it as an important tool in accelerating the use of advanced capabilities.[50] Many state and local PSAPs are already addressing the question of competition by publicizing Requests for Proposals that define minimal acceptable solutions and seeking competitive bids. The Commission should consider additional ways to enable competition for the delivery of E911 service that will provide increased opportunities and choices for 911 governing authorities.

E. Confidentiality and Privacy Concerns Must be Fully Protected When Using NG911 Systems

Confidential and personal information must be protected, and the Commission should take care to ensure that NG911 systems adhere to appropriate confidentiality, disclosure, and

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Local PSAPs will continue to support legacy services until they get additional funding to participate with NG911.

[50] The *Notice* points out that "NG911 systems will provide the opportunity for competitive services to emerge in the 911 marketplace." *Notice* at ¶ 67.

retention statutes.[51] In an NG911 system, a variety of media types containing a variety of personal information may be received and shared with multiple entities, including the government, private sector, and other public safety entities. There are significant challenges associated with providing this personal information – for example, it is unclear how to identify the person associated with the emergency and their personal information as the subscriber or caller may not be the person in need of assistance. As detailed in Sections II.B and IV.A, auxiliary personal and medical information present particularly thorny privacy issues. This data should not be used in the NG911 network unless Congress or the FCC—whichever is jurisdictionally appropriate—indemnifies network providers from privacy liability. Even after such protection is granted, auxiliary personal data, such as medical conditions and treatment needs, should only be forwarded by a PSAP, EMS, or other first responders on an express prior-consent basis.

F. The Commission Should Consider Cost Allocation and Technology Feasibility When Investigating Location Capability Issues

The Commission should not adopt onerous and infeasible regulations that would require access providers to provide call location data to end systems and/or voice service providers on reasonable and non-discriminatory terms, using standard protocol interfaces.[52] In most cases, there are no standardized interfaces that would allow access providers to locate non-traditional voice calls, such as VoIP calls or data sessions. And if the Commission required this capability, the carrier would have the responsibility to ensure that call location data is not used for other, potentially nefarious purposes such as fraud.

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[51] The Commission seeks comment on "whether privacy laws or regulations will need to be modified to adapt to the NG911 environment." *Notice* ¶ 75.

[52] *Notice* ¶ 76.

Further, the lack of a standard interface means that carriers would be forced to develop the capability from the ground up, at what would surely be a substantial cost. Access providers already must pay to develop technologies to comply with ordinary E911 requirements, and they should not be tasked with inventing further solutions. It is more appropriate for over the top VoIP services riding on a broadband or wireless broadband network to pay for development of new location technologies for non-traditional calls and data. These VoIP services would be utilizing the capabilities of the underlying network and should not be allowed a "free ride" at the expense of the access provider.

For stationary, nomadic, and mobile end systems in wireline and non-cellular wireless networks, AT&T is not aware of any technology that will reliably allow for automatic location discovery for purposes of call routing and dispatch other than user-provided address information.[53] Since the technology is currently non-existent, adoption of requirements is premature.

Finally, the Commission asks "[w]hat, if any, obligations need to be imposed on Internet service providers, residential and enterprise equipment vendors, and other parties to ensure that location information can be discovered, conveyed, and validated?"[54] AT&T proposes that no obligations be imposed on ISPs and residential and enterprise equipment vendors. Obligations should fall instead on the over-the-top services using the Internet service provider or equipment vendor's products.

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[53] The Commission also seeks comment on how "stationary, nomadic, and mobile end systems in wireline and non-cellular wireless networks (including Wi-Fi) [can] reliably discover their location information to ensure call routing and dispatch." *Notice* ¶ 76.

[54] *Notice* ¶ 76.

G. Network and Data Security Questions Could Be Resolved Using Private Content Delivery

The Commission is properly concerned about security, integrity and reliability issues that arise because of the IP-based nature of NG911 architecture and its complex relationship with other systems.[55] Any solution must address cyber-security and network congestion issues. Support of new media types in NG911 systems opens the PSAP and the NG911 system to new threats and vulnerabilities, including denial of service attacks, malicious messages, and malware. And live two-way video raises issues of privacy and security for the PSAP representative. The Commission should engage a study to identify the risks and vulnerabilities in an NG911 environment and methods to mitigate these potential vulnerabilities.

H. Education Will Play a Key Role in the Transition to NG911

The success of NG911 services will require a major education campaign on the part of federal, state, and local governments. In the *Notice*, the Commission raises the question of what role public information campaigns and education will play in the transition to NG911.[56] PSAPs will require particular attention so that they are able to receive and process the new types of 911 information as well as protect the information's confidentiality. Consumers will need to be fully informed of both the capabilities and limitations of NG911 services.[57] The Commission should also encourage the involvement of the disability community in any further rulemakings and be

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55 *Notice* ¶ 77.

56 *Notice* ¶ 78.

57 "[The general public will want to know what, how and when next generation services will be available in their area. The public will likely have questions regarding NG9-1-1 system capabilities and limitations. . . Consequently, keeping the public informed and involved through the planning and deployment of NG9-1-1 will be important to its ultimate success." Intelligent Transportation Systems, U.S. Department of Transportation, Next Generation 9-1-1 (NG9-1-1) System Initiative: Transition Plan at 44 (Feb. 2, 2009) *available at* http://www.its.dot.gov/ng911/pdf/NG911_Transition_PlanFinal.pdf.

receptive to the disability community's assistance in educating its members of the transition to NG911.

The Commission also suggests that it "foster common terms and terminologies to contribute to facilitate the deployment of NG911."[58] AT&T instead recommends that the creation of common terms and terminology be left to standards development organizations. These organizations create and maintain standards that effectively incorporate the interests of a variety of stakeholders, including consumers, public safety, and the wireless industry.

I. Unidentified Caller Access to NG911 Is Likely to Be an Issue with NG911 Systems, and PSAPs Should be Responsible for Blocking Fraudulent and Malicious Calls

The provision of emergency call credentials to reduce the risk of unintentional, prank, or malicious calls to a PSAP is an overly onerous process without a corresponding benefit.[59] While these calls will occur on occasion, requiring state motor vehicle authorities to provide Network and Application Service Provider credentials that would be valid for emergency calls creates a huge administrative overhead for organizations that are not equipped to handle such a process. Furthermore, there would still be the problem of manually entering credentials before making an E911 call, and the credentials could be misused. Instead, PSAPs should develop a method for blocking fraudulent and malicious calls without handing the problem back to the carriers.

The Commission also should reject the proposal to require providers of public and semi-public wireless data networks, such as 802.11 hot spots, to provide access for emergency calls.[60] This proposal presents significant liability concerns. The wireless data networks will likely not

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58 *Notice* ¶ 78.

59 *Notice* at ¶ 80.

60 *Notice* at ¶ 81.

know that the call is an emergency call, given the fact that data making up the call is merely data without any special signifiers. It is overly burdensome and technically infeasible for public and semi-public wireless network providers to shoulder the responsibility for providing access for emergency calls. In addition, requiring that 802.11 hot spots provide access for emergency calls increases the likelihood of receiving malicious and fraudulent E911 calls because more users can remain anonymous on such networks.

VI. JURISDICTION, AUTHORITY, AND REGULATORY RULES

AT&T foresees that implementing NG911 will be an evolution, rather than a revolution. The Commission inquires how to coordinate NG911 planning and implementation among federal, state, tribal, and local governments.[61] CSRIC concluded that the next generation emergency services requirements developed through the NENA NG Messaging Working Group's efforts would be focused on IP-based non-voice-centric emergency service requests.[62] As this is a component of a major change to the 911 service, adoption of these requirements will take several years. Experience suggests that unless a consensus exists among government agencies at the local, state, and federal levels; carriers; vendors; and other service providers, implementation for many PSAPs could take a long time.

The FCC also asks if it has jurisdiction to oversee the transition to NG911, as PSAPs, service providers, consumer device manufacturers and software developers will all be involved.[63] While the FCC's reach over broadband access providers is being clarified, more and more services today do not have facilities and are not access providers. The FCC's jurisdiction over

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61 *Notice* at ¶¶ 83-86.

62 *Transition to Next Generation 911 Final Report* at 27.

63 *Notice* at ¶ 85.

these types of entities is as yet undetermined and the Commission should proceed cautiously before extending its reach over these types of entities.

VII. CONCLUSION

AT&T supports the Commission's broad inquiry into the development of NG911 systems. A successful transition will depend on a standardized, basic NG911 infrastructure being in place before additional advanced services, such as texting or video, are added. The Commission also should ensure full liability protection for carriers during and after the transition to NG911 systems, including indemnification against privacy claims. Additionally, the present method of funding 911 services through subscriber fees will be inadequate in a NG911 environment. Instead, the Commission should follow the recommendation from the CSRIC Working Group 4B to form a Blue Ribbon Panel to address the funding issues related to the deployment of NG911. A regulatory approach undertaken consistent with this framework will advance the objective of delivering to all Americans a truly modern emergency services communications system.

Respectfully submitted,

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